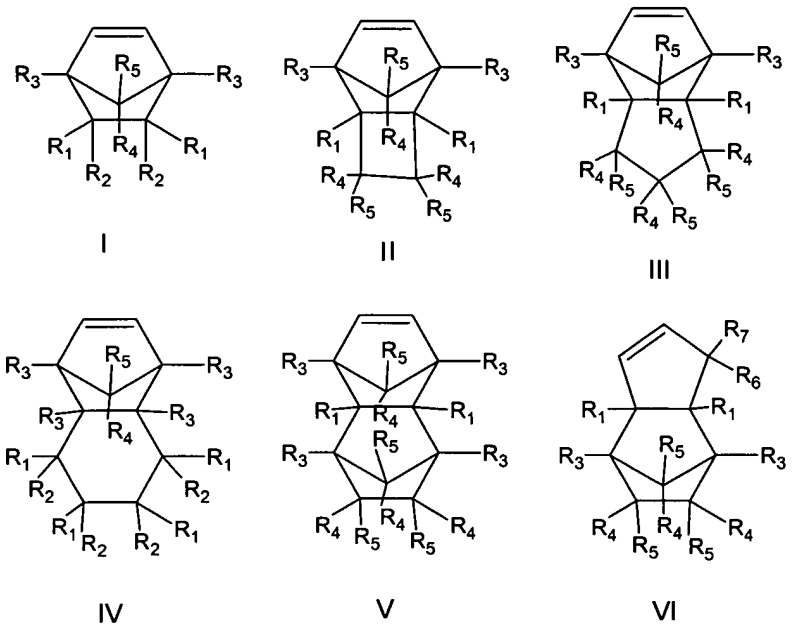


where, in Figure 1, R_1-R_7 are independently H, F, (C1-C8)alkyl, (C1-C8)fluoroalkyl, etc but at least one of R_1-R_6 has the pendant oxyAOCA functionality described in structure 1, or an alcohol functionality which can be capped to give the unit of structure 1.

Figure 1: Generic structures for the norbornene-based monomer

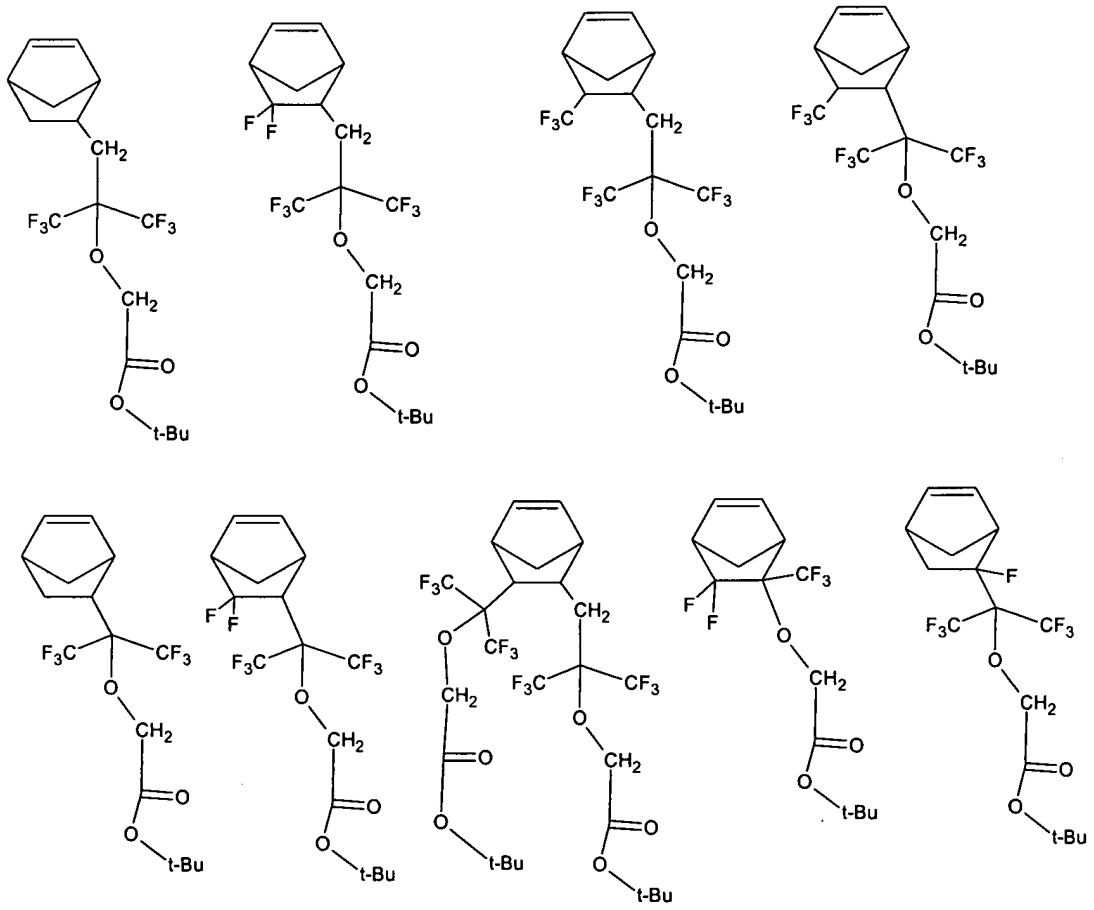
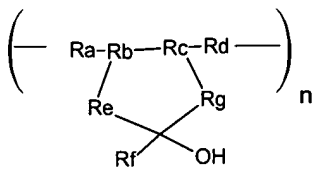
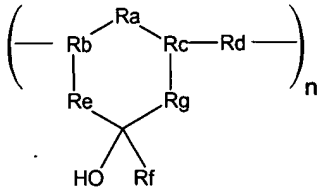


Figure 2 Examples of BOCME protected norbornene monomers



I



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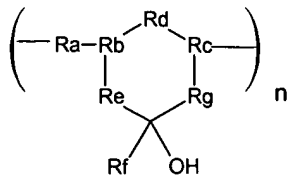

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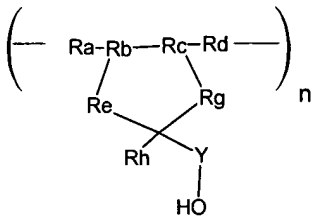

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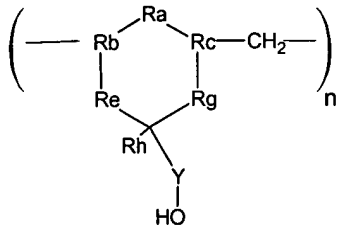

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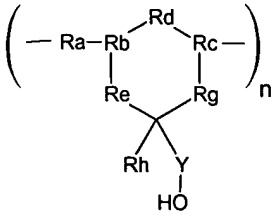

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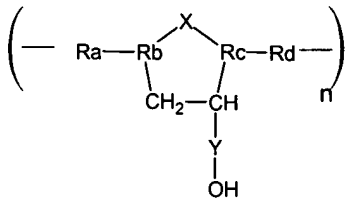

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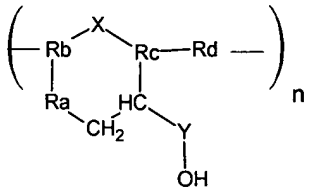

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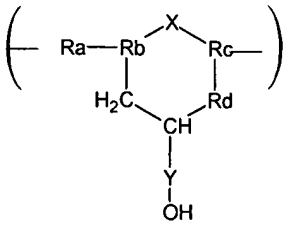


VIII

Rf = fluoroalkyl group C1-C8

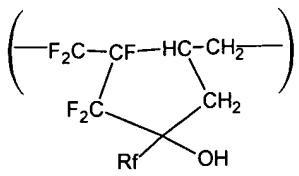
Y= alkyl or fluoroalkyl spacer group (C1-C8)

Ra, Rb, Rc, Rd, Re, Rg, Rh = alkyl, fluoroalkyl or fluorocycloalkyl,

Also, Ra-Re and Rg can be substituted with alkyl, fluoroalkyl, cycloakyl, fluorocycloalkyl or with a spirofluoroalkyl or spiroalkyl subsituent

X= CF_2, O

Figure 3 Generic monocyclic polymers having pendant hydroxy groups



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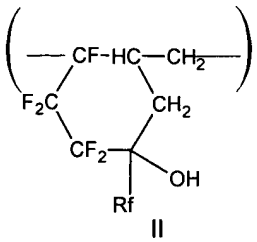

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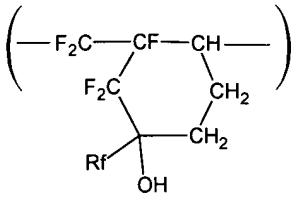

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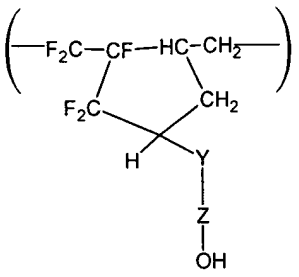

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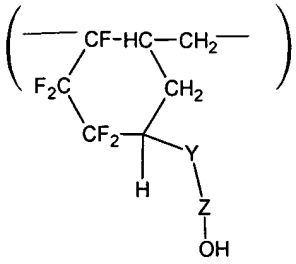

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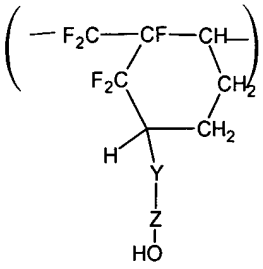

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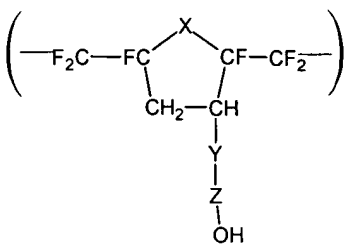
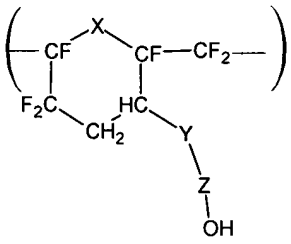


VII



VIII

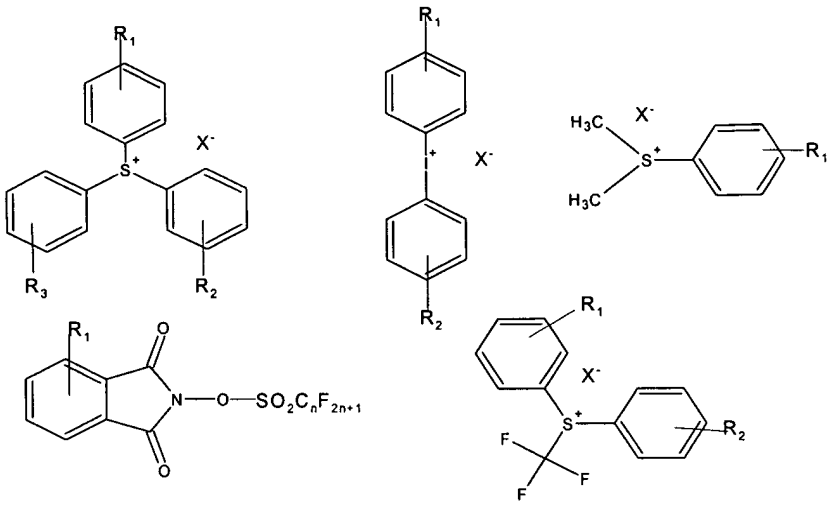
Rf = fluoroalkyl group C1-C8

Y= alkyl or fluoroalkyl spacer group C0-C8

Z= CF_2, $C(C_nF_{2n+1})_2$, $C(C_nF_{2n+1})(C_nH_{2n+1})$,
n=1-12

X= CF_2, O

Figure 4 Partially fluorinated monocyclic polymers having pendant alcohol groups



R_1, R_2, R_3 are independently alkyl, fluoroalkyl, F, OC_nH_{2n+1}, OC_nF_{2n+1}, CO_2-tert-Bu, OCH_2-CO_2-tert-Bu n=1-4, OCH_2OCH_3

X^- =Anion of non-nucleophlic strong acid eg $^-OSO_2C_nF_{2n+1}$; AsF_6^-, SbF_6^-, $^-N(SO_2C_nF_{2n+1})_2$; $^-C(SO_2C_nF_{2n+1})_3$

Figure 5 Examples of Photoactive Compounds

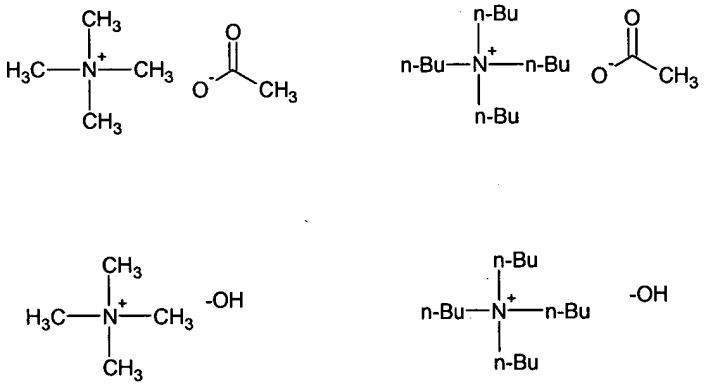


Figure 6 Examples of suitable ammonium bases

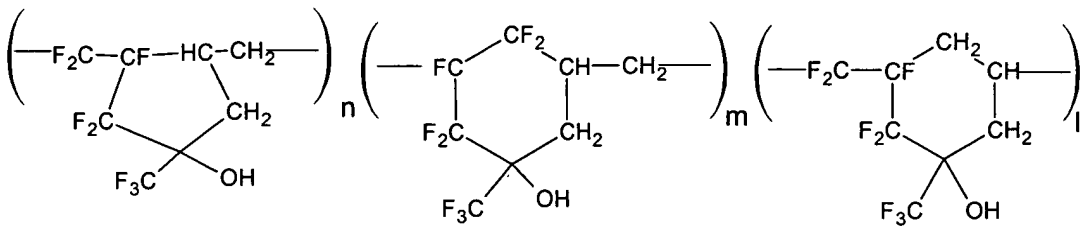


Figure7 PPTHH poly(1,1,2,3,3-pentafluoro-4-trifluoromethyl-4-hydroxy-1,6-heptadiene) which is a mixture of 5 and 6 membered rings

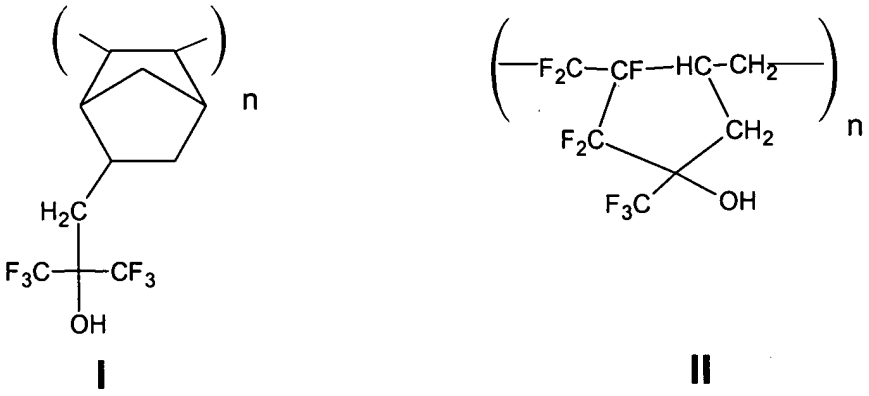


Figure 8 Fluoroacohol polymers made from polymerization of either alicyclic moieties (I) or fluorinated dienes (II)